

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference 7652/JB | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) | |
| International application No. PCT/US00/18070 | International filing date (day/month/year) 30/06/2000 | Priority date (day/month/year) 01/07/1999 |
| International Patent Classification (IPC) or national classification and IPC C11D11/00 | | |
| Applicant THE PROCTER & GAMBLE COMPANY et al. | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 6 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

| | |
|---|--|
| Date of submission of the demand 30/10/2000 | Date of completion of this report 21.03.2001 |
| Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 | Authorized officer Pentek, E Telephone No. +49 89 2399 8489  |

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US00/18070

I. Basis of the report

1. This report has been drawn on the basis of *(substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments (Rules 70.16 and 70.17).)*

Description, pages:

1-7 as originally filed

Claims, No.:

1-10 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
 - ☐ the language of publication of the international application (under Rule 48.3(b)).
 - ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority in written form.
 - ☐ furnished subsequently to this Authority in computer readable form.
 - ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 - ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
4. The amendments have resulted in the cancellation of:
- ☐ the description, pages:
 - ☐ the claims, Nos.:
 - ☐ the drawings, sheets:
5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

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(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|------|
| Novelty (N) | Yes: Claims | |
| | No: Claims | 1-10 |
| Inventive step (IS) | Yes: Claims | |
| | No: Claims | 1-10 |
| Industrial applicability (IA) | Yes: Claims | 1-10 |
| | No: Claims | |

2. Citations and explanations
see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

ITEM V:

1. Reference is made to the following documents:

D1: US-A-5 413 727

D2: US-A-5 213 706

D3: GB-A-1 577 140

D4: GB-A-1 489 867

D5: US-A-4 228 043

D6: WO 97/43392

D7: US-A-4 257 908

2. D1 discloses liquid automatic dishwashing detergent compositions comprising a source of potassium ions to provide a potassium/sodium weight ratio of from 1:1 to 45:1, such that substantially all the detergent builder salts and other normally solid detergent additives present in the compositions are dissolved in the aqueous phase (see column 1, lines 53 and 54 and column 5, lines 36 to 41). That means that the compositions of D2 should at least be clear or translucent through the addition of said source of potassium ions. Examples 6, 8 and 24 show such compositions which does not comprise potassium tripolyphosphate. Therefore, the subject-matter of independent claims 1 and 2 is not novel over the teaching of D1.

D2 relates to a homogeneous liquid (gel) automatic dishwashing detergent composition comprising: (a) 5-28% sodium trimetaphosphate, (b) 3-12% potassium hydroxide, (c) 2-20% sodium silicate, (d) 0-3% thickening polymer, and balance water, wherein the composition contain both sodium and potassium ions in a K:Na weight ratio of 0.5 and less than 1, is substantially free of added potassium salts and substantially all of the alkaline components (a), (b) and (c) are soluble to form a homogeneous liquid detergent composition (see column 1, lines 7 to 16 and claim 1). Thus, such a composition should also be at least clear or translucent. In view of examples 1, 9, 10, 11 and 14 to 17, the addition of potassium hydroxide to compositions comprising sodium trimetaphosphate leads to homogeneous (or at least clear or translucent) liquid detergent compositions. In consequence, the subject-matter of independent claims 1 and 2 is also not

novel in the light of D2.

D3 is concerned with homogeneous, clear, built liquid detergent compositions which can be obtained by using certain mixtures of sodium tripolyphosphate and potassium orthophosphate. These compositions do not comprise potassium tripolyphosphate (see examples) and the weight ratio of K:Na is comprised within the range defined in independent claim 2.

Therefore, the subject-matter of independent claim 2 is not novel over the teaching of D3

D4 refers to clear liquid detergents for use in automatic dishwashing machines, said detergents comprise both Na and K ions in the weight ratio as indicated in the present invention and contain no potassium tripolyphosphate (see passages indicated in the Search Report).

Thus, the subject-matter of independent claim 2 is not novel in view of D4.

D5 describes a clear liquid detergent composition being free of potassium tripolyphosphate and comprising potassium alkylbenzene sulphonate, potassium coconut soap, potassium orthophosphate and potassium carbonate (example III). The weight ratio of potassium:sodium seems to correspond to that disclosed in the present claims.

Therefore, D5 is also novelty destroying for the subject-matter of independent claim 2.

D6 refers to transparent liquid bleaching compositions (pages 4 and 17). One of these compositions (example IX) comprises potassium bromide, tetrapotassium pyrophosphate and tripotassium phosphate and no potassium tripolyphosphate. The weight ratio of potassium:sodium also seems to correspond to that disclosed in present claim 2.

Consequently, the teaching of D6 anticipates the subject-matter of independent claim 2.

D7 is also novelty destroying for the subject-matter of independent claim 2 as it relates to translucent single phase gel compositions comprising potassium pyrophosphate. The compositions are free from potassium tripolyphosphate and

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have a potassium:sodium weight ratio as defined in the present application (see claim 1 and examples of D7).

The subject-matter of dependent claims 3 to 10 is also known from at least one of the documents D1 to D7.

3. Even if the novelty objections raised above could have been overcome, the present invention will not involve an inventive step over the teaching of D1, D2, D3 or D4.

ITEM VII:

4. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in documents D1 to D7 is not mentioned in the description, nor are these documents identified therein.

ITEM VIII:

5. Claims 2 to 10 lack clarity because a dependent claim for a process (process claim) cannot refer to a claim of a different category (product claim).
6. Claim 4 cannot be dependent on claim 3 since KOH is not listed in the group of potassium sources as defined in claim 3. For a similar reason claim 10 cannot refer to claim 9.
7. The vague and imprecise statement in the description on page 7 implies that the subject-matter for which protection is sought may be different to that defined by the claims, thereby resulting in lack of clarity (Article 6 PCT) when used to interpret them (see also the PCT Guidelines, III-4.3a).

INTERNATIONAL SEARCH REPORT

International Application No
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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C11D11/00 C11D3/06 C11D7/16 C11D7/10 C11D3/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C11D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| X | GB 1 577 140 A (UNILEVER LTD) 22 October 1980 (1980-10-22) page 1, line 53-60; examples --- | 1-10 |
| X | GB 1 489 867 A (ALBRIGHT & WILSON) 26 October 1977 (1977-10-26) page 1, line 7 page 2, line 10,11 examples 5,6,13 --- | 1-10 |
| X | US 5 413 727 A (DRAPIER JULIEN ET AL) 9 May 1995 (1995-05-09) column 1, line 53,54 column 5, line 36-41 column 15, line 47 -column 16, line 12 examples 6,8,24 --- -/-- | 1-10 |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

17 October 2000

Date of mailing of the international search report

26/10/2000

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

International Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
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| X | US 5 213 706 A (RAPISARDA ANTHONY A ET AL) 25 May 1993 (1993-05-25) column 1, line 13,33-43; claim 1; examples --- | 1,2,4-10 |
| X | US 4 228 043 A (VAN DEN BROM GUIDO C) 14 October 1980 (1980-10-14) example III --- | 2-10 |
| X | WO 97 43392 A (PROCTER & GAMBLE) 20 November 1997 (1997-11-20) page 4, last paragraph page 17, paragraph 2 example IX --- | 2,3,6-10 |
| X | US 4 257 908 A (WIXON HAROLD E) 24 March 1981 (1981-03-24) claim 1; examples ----- | 2,6-10 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 00/18070

| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
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Information on patent family members

International Application No

PCT/US 00/18070

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 00/18070

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
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PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| | | |
|--|---|--|
| Applicant's or agent's file reference 7652/JB | FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below. | |
| International application No. PCT/US 00/ 18070 | International filing date (day/month/year) 30/06/2000 | (Earliest) Priority Date (day/month/year) 01/07/1999 |
| Applicant THE PROCTER & GAMBLE COMPANY | | |

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.